

371 Application
Filed August 11, 2006
International Application No. PCT/EP2005/003043
Preliminary Amendment dated August 11, 2006

Amendments to the Claims:

The listing of claims will replace all prior versions and listings of claims in the application.

Claims for filing in US:

1-33 cancelled.

34. (New) A complex comprising first and second peptides, the first peptide comprising the V3 loop of gp120, and wherein the V3 loop is coordinated with a binding region on the second peptide, the binding region comprising at least residues 21-40 and 46-58 of SEQ ID NO 1, or a fragment, mutant or variant thereof capable of binding residues 301-419 of SEQ ID NO. 2.

35. (New) A complex comprising first and second peptides, the first peptide comprising the V3 loop of gp120, and wherein the V3 loop is coordinated with a binding region on the second peptide, the binding region being derived from Tat and being recognisable by the monoclonal antibody directed against the CCR5 second extracellular loop described by Lee, B., *et al.*, *J. Biol. Chem.*, 1999, Vol. 274, 9617-9626.

36. (New) The complex of claim 34, wherein the binding region comprises at least residues 21-58 of SEQ ID NO 1, or a fragment, mutant or variant thereof capable of binding residues 301-419 of SEQ ID NO. 2.

37. (New) The complex of claim 34, prepared with non-oxidised Tat.

38. (New) The complex of claim 34, wherein the peptide comprising the V3 loop comprises some or all of Env in addition to the V3 loop.

39. (New) The complex of claim 34, wherein the peptide comprising the V3 loop comprises the complete sequence of SEQ ID NO 2, or a fragment, variant or mutant thereof capable of binding a peptide consisting of residues 21-58 of SEQ ID NO 1.

40. (New) The complex of claim 34, wherein the peptide comprising the V3 loop consists of the V3 loop region of gp120.
41. (New) The complex of claim 34, wherein the peptide comprising the V3 loop comprises at least residues 301-419 of SEQ ID NO. 2, or a fragment, variant or mutant thereof capable of binding a peptide consisting of residues 21-58 of SEQ ID NO 1.
42. (New) The complex of claim 34, having all or part of gp160 as a component thereof, the gp160 comprising at least the V3 loop of gp120 and lacking at least the majority of the V2 loop of gp120.
43. (New) The complex of claim 34, having ΔV2Env as a component thereof.
44. (New) The complex of claim 34, wherein the peptide comprising the V3 loop comprises at least residues 301 to 419 as shown in SEQ ID NO. 2.
45. (New) The complex of claim 34, further comprising a molecule or substance capable of interacting with Env to expose a functional V3 loop.
46. (New) The complex of claim 45, wherein said molecule or substance is CD4 or a fragment, mutant or variant thereof.
47. (New) The complex of claim 34, further comprising a heparan sulphate, optionally further comprising at least one other molecule capable of binding said heparan sulphate.
48. (New) The complex of claim 34, further comprising a substance selected from integrins, basic fibroblast growth factor, CD26, VEGF receptors, and chemokine receptors.
49. (New) The complex of claim 34, wherein the binding region is contained within a fragment of Tat generatable by proteasomes of human cells on exposure to Tat.
50. (New) The complex of claim 49, wherein the Tat fragment is selected from: fragments containing the cysteine, basic and RGD regions of Tat; fragments

containing the cysteine and basic regions of Tat; fragments containing the basic and RGD region of Tat; and, fragments containing the basic region of Tat, alone.

51. (New) The complex of claim 34, wherein said peptides are cross-linked.
52. (New) Use of the complex of claim 34 to generate antibodies thereagainst.
53. (New) The use of claim 52 in a process to obtain a monoclonal cell line.
54. (New) The use of claim 52, wherein the antibodies are selected such as not to recognise any of the epitopes of the group of native Tat, gp160, CD4 or gp120, CCR5, and the V3 loop region of gp120 also recognized by antibodies generated by one of the group when used as immunogen in isolation but only as the complex of claim 34.
55. (New) An antibody obtained by a process as defined in claim 52.
56. (New) The antibody of claim 55 which is humanised to prevent or reduce an adverse immune reaction on injection into a human.
57. (New) Use of the antibody of claim 55 in prophylactic or therapeutic passive immunisation against a virus infection, wherein said virus expresses Tat.
58. (New) The use of claim 57, wherein said virus is HIV.
59. (New) The use of claim 57, wherein the recipient is an expectant or nursing mother.
60. (New) Use of the complex of claim 34 as an immunogen for vaccination.
61. (New) Use according to claim 60, wherein said virus is HIV.
62. (New) The complex of claim 34, provided as a combination of the peptides in a vehicle suitable for injection.
63. (New) A kit comprising at least two separate preparations of the components of the complex of claim 34.
64. (New) Use of the complex of claim 34 in therapy.

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65. (New) A method for the treatment or prophylaxis of a viral infection, whereby the infecting virus expresses a molecule capable of forming a ternary complex between said molecule, CD4 and CCR5, comprising administering the complex of claim 34 to patient in need thereof .

66. (New) Use of the complex of claim 34 to establish whether a sample from a patient contains antibodies against said complex.